

NAVAL SOLUTIONS

Naval fleets across the world choose PSM to provide level measurement solutions.

- Corvette
- Fleet Support Ships
- Aircraft Carrier
- Landing Craft
- Frigate
- Patrol Vessels
- BAM
- Support Tanker

Clients include the following Navies:

Australia, Brazil, United Kingdom, Canada, Korea, Malaysia, Norway, Oman, Singapore, Saudi Arabia, Spain, Thailand, Turkey, UAE.

Within the Shipbuilding Industry Naval Vessels are one of PSM's primary markets. We have many years of experience in supplying instrumentation for both new construction and retrofit Naval projects to Shipyards and Navies across the world.

Our project management team has much accumulated knowledge regarding the additional requirements of this sector and can support you with specification, system design, project management, and commissioning.



SUPERYACHT SOLUTIONS

The most prestigious superyacht projects choose PSM to provide level measurement solutions.

Notable yachts equipped by Scanjet PSM :

- 49m Amels | Netherlands | 1993
- 99m Feadship / Netherlands / 2017
- 47m Feadship / Netherlands / 2015
- 59m Pendennis, UK, 2022
- 70, Pendennis, UK, 2018
- 37m Oyster, UK, 2019
- 74m Turquoise, Turkey, 2022
- 75m Turquoise, Turkey, 2019
- 74m Turquoise, Turkey, 2021
- 47m Ursa, Turkey, 2023
- 80m Yachtley, Turkey, 2012
- 88m Golden Yachts, Greece, 2021
- 78m Golden Yachts, Greece, 2022
- 48m RossiNavi, Italy, 2014

We have experience both on new build and refurbishment projects for this fast-growing sector of the ship and boat building industry, supplying everything from large superyachts to classic yachts and multi-hulled vessels.

Our project management team can support you with specification, system design, project management, delivery and commissioning.



FERRY SOLUTIONS

The most prestigious superyacht projects choose PSM to provide level measurement solutions.

Sample ferries equipped by Scanjet PSM :

- Ro-Ro - Pictou - NFL - 1993
- Ro-PAX - Astilleros Españoles – P&O 2000
- 3 x Ro-PAX - Sembcorp Marine - Norled - 2022
- Ro-PAX - Götaverken - Stena - 2020
- 2 x RoRo – Appledore – Shannon - 2023

As well as the usual ballast, draught and service tank gauging needs, passenger carrying ferries have additional regulations when it comes to safety with flood detection systems being a mandatory fitment

PSM's Connect central monitoring system has a specific approved solution for this requirement which can be separated from or integrated into the tank gauging package.



**'CONNECT'
MONITORING SYSTEM**



**BLACK & GREY
WATER LEVEL**



**FLOOD DETECTION
SYSTEM**



**FUEL & LUB
OIL LEVEL**



**RADAR LEVEL
CARGO TANKS**



TRIM & HEEL SYSTEM



BILGE LEVEL SWITCH



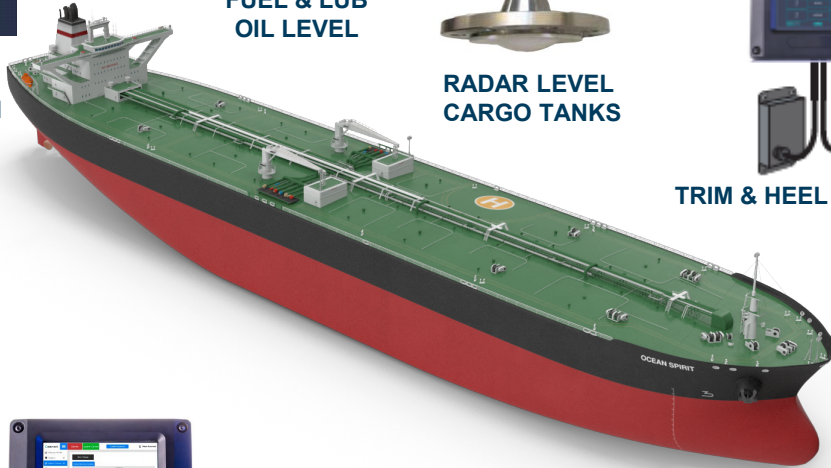
DRAUGHT INDICATION



**BALLAST WATER &
DRAUGHT LEVEL**



**LOCAL CONTENTS
GAUGE**



TANKER SOLUTIONS

When it comes to cargo, accurate, reliable level measurement is paramount, that's why tankers worldwide trust PSM.

A sample of tankers equipped by Scanjet PSM :

- Oil tanker - Ceksan - ABC - 2021
- 2x Chemical tankers - DSM Gemi - Duzgit – 2019
- 3 x Chemical tankers - GSI - Hafnia – 2019
- 6x Bulk carriers – Sasebo – Seanergy – 2021
- Crude oil tanker – Hyundai – World Carrier – 2023
- 24m Anti-pollution – Eurocraft – Transmare – 2023
- Porto Vado X – Costal Oil Tanker - 2024

Tank gauging systems for Tankers will include all ballast and service tanks, draught measurement and most importantly the cargo tanks themselves. High performance solutions are required for this, and our Radar level transmitter meets this need.

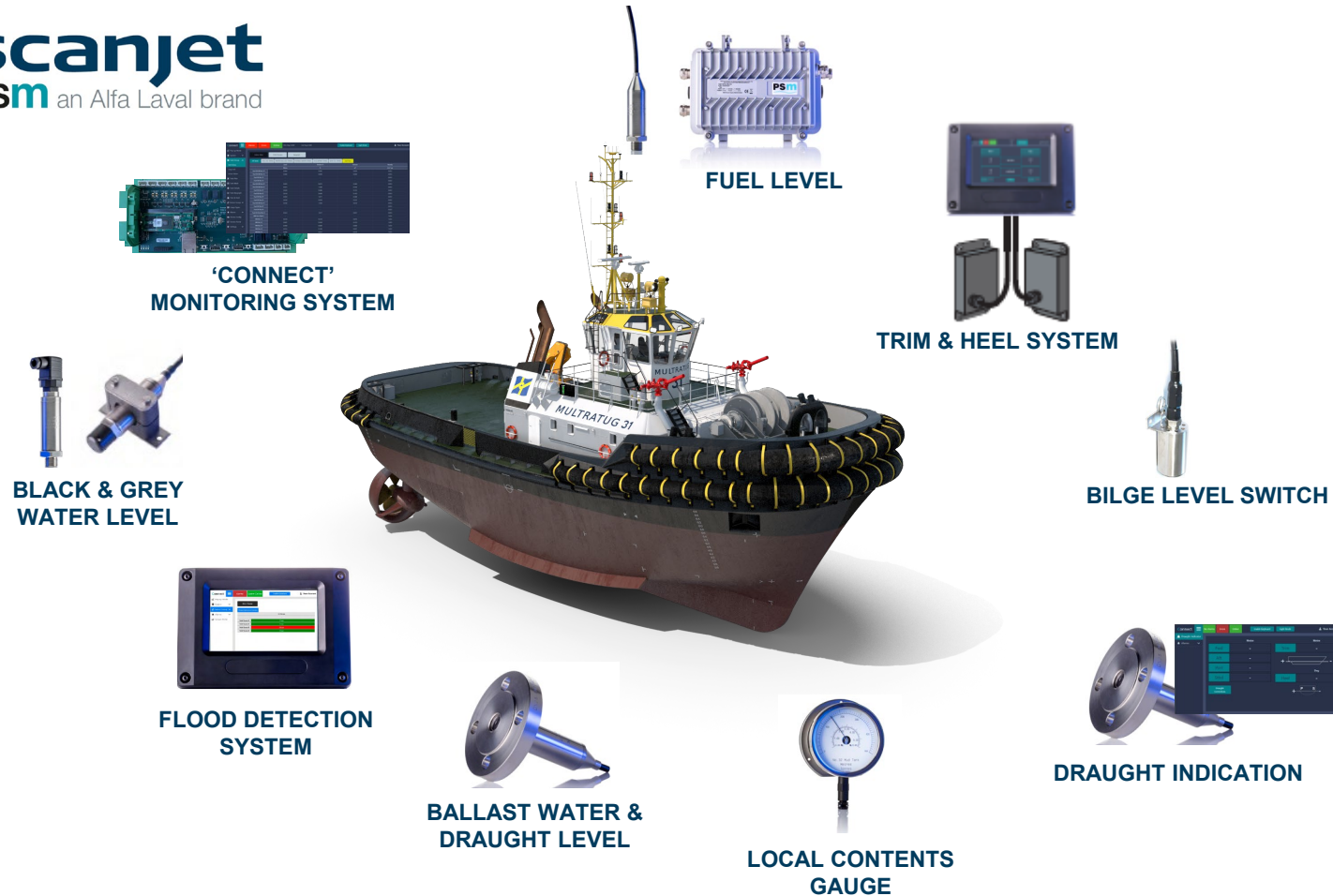
Other measurements such as tank top pressure / vacuum, manifold and pump pressures, and cargo temperature monitoring are all integrated into the system.

TUGBOAT SOLUTIONS

Tugboats play a vital role in operations for all vessel types, so many operators and builders choose PSM for their level measurement solutions.

Notable tugboats equipped by Scanjet PSM :

- 4 x 50T Tractor – Grandweld – Kuwait PA - 2021
- 4 x 50T Bollard Pull – Industan – Indian Navy
- 4 x 60T ASD Tugs – Egyptian Ship Repairs – 2020



PSM provide a dedicated solution for Tug gauging systems. Based around our VPM 4300 series of displays and the Connect software, the system communicates with our APT1000 tank level transmitters via a digital network which minimises cable use and maximises simplicity of installation



**'CONNECT'
MONITORING SYSTEM**



FUEL LEVEL



TRIM & HEEL SYSTEM



**BLACK & GREY
WATER LEVEL**



BILGE LEVEL SWITCH



**FLOOD DETECTION
SYSTEM**



**BALLAST WATER &
DRAUGHT LEVEL**



**LOCAL CONTENTS
GAUGE**



DRAUGHT INDICATION

WORKBOAT SOLUTIONS

From crew transfer vessels to anchor handling ships, our equipment is a reliable and trusted resource by operators worldwide.

Notable workboats equipped by Scanjet PSM :

- 6x 21m Crew Boats - Grandweld - 2023
- 4x 42m Crew Boats - Grandweld - 2023
- 107m Supply Ship - Oceaneering - BAE 2019
- 2x 60m MPOV – Zamil – Zamil Offshore – 2019
- 62m MPOV – Berjaya – P&O – 2016
- 65m AHTS – Xinlian – Pacific Radiance – 2015
- 2x 58m OSV – Yuexin – Vallianz – 2015
- 4x 83m PSV – Cosco – Vroon - 2016

From simple local gauges and centralised display on crew boats to fully featured systems including all tanks and with outputs to Loading Computers on OSV's we have the experience.

Our project management team can support you with specification, system design, project management, delivery and commissioning.

APT500 Analogue Hydrostatic Pressure Transmitter

- Constructed in Stainless Steel, Titanium, or Hastelloy, to suit any application
- Marine Type approved
- IECEX and ATEX certified for hazardous areas.
- Accurate to 0.2%
- Temperature compensated from 0 to 70°C with extended high temperature options
- Gauge and Absolute pressure options
- All versions are fully submersible construction
- Full range of fitting options



A robust sensor for the marine industry.

- Industry Standard 4-20mA 2 wire output

The APT500 build upon PSM's 40 years of experience of supplying tank level and pressure measurement solutions for the marine industry. Its rugged construction high accuracy and choice of materials make it an ideal choice for all shipboard duties, and with a full range of mounting adaptors it is readily suitable for retrofit duties replacing older or defective instruments.

Applications

Naval	Superyachts	Cruise Ships	Ferries
Tankers	Offshore	Tugboats	Workboats



APT1000 Dual Mode Hydrostatic Transmitter

- Constructed in Stainless Steel, Titanium, or Hastelloy, to suit any application
- Marine Type approved
- Both pressure and liquid level measurement
- IECEX and ATEX certified for hazardous areas.
- Accurate to 0.1%
- Temperature compensated from 0 to 70°C with extended high temperature options
- Fully user programmable via RS485 using PSM's free ACU1000 utility which allows configuration of set range, SG, tank table correction to enable 4-20mA output to represent actual tank volume
- RS485 output features a full Modbus map of all measured parameters from raw pressure to actual volume in user selected units.



A uniquely powerful and intelligent transmitter.

- Intelligent digital & analogue dual-mode operation provides outputs of 4-20mA and / or RS485 Modbus

The APT1000 is a marine and Intrinsically safe approved tank level transmitter, designed for tank-level measurement applications using the hydrostatic principle and offering the highest performance, versatility, functionality and reliability standards for the marine industry.

Applications

Naval	Superyachts	Cruise Ships	Ferries
Tankers	Offshore	Tugboats	Workboats



Remote Function Modules

- RFM 1 - termination for a single transmitter
- RFM 4 – termination for up to four transmitters
- RFM ISR – Provides protection for both the power and Modbus loop
- Significant cable savings by the use of a single 4 core cable interconnecting all transmitters
- Transmitters can be communicated with from any point on the network – simplifying commissioning
- One safety barrier protects a complete network – unlike 4-20mA transmitters which require a barrier for each instrument

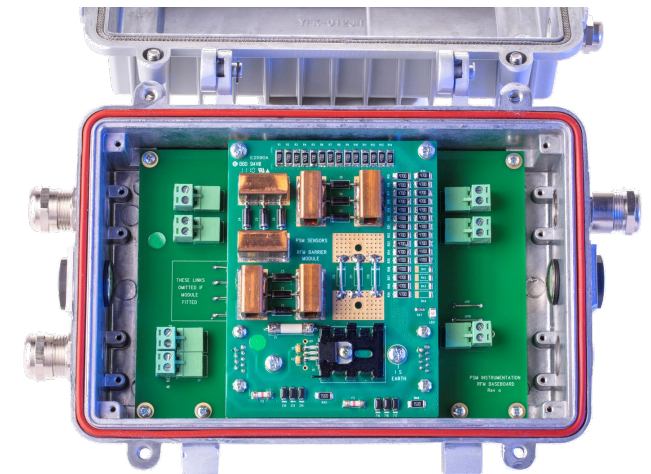


- The RFM family facilitate the construction of a simple network of transmitters

The RFM range of termination and barrier modules allow construction of a flexible, simple and safe RS485 network of APT1000 transmitters using just a single 4-core (2-pair) multi-drop cable. Industry standard Modbus RTU protocol ensures open connection to higher-level monitoring systems or to PSM's own "Connect" Display and Monitoring Solutions.

Applications

Naval	Superyachts	Cruise Ships	Ferries
Tankers	Offshore	Tugboats	Land-Based



A powerful acquisition and display units for smaller vessels

Versatile Process Monitor

- Integral 7" touchscreen display
- Communicates with all connected APT1000 transmitters via the RS485 network using Modbus RTU
- Processes all level signals received to provide a real-time display of tank contents and any alarm conditions
- Display screens customisable to suit each application
- Multiple displays can be interconnected via ethernet
- Serial output of data to other onboard systems



- Partnering the APT1000 transmitters and RFM termination modules to provide a complete tank gauging solution

The VPM 4300 offers tank content monitoring with a centralised tank display to present the operator with a clear picture of current status. The VPM is configured to each the application based on the number, size and type of tanks to be measured.

Outputs of all tank status information can be provided via serial link to other onboard systems.

With multiple repeater display options and simple, cost-effective installation, our VPM is the perfect choice for all your tank content indication requirements.

Applications

Naval	Superyachts	Cruise Ships	Ferries
Tankers	Offshore	Tugboats	Land-Based



Flood Detection & Display System

- Works with PSM's BLS9200 Flood Detection Switches
- Displays Clear / Alarm / Cable Short / Cable Break status
- Data Output to Central Systems / VDR
- External Alarms and Multiple Displays can be added
- As required by SOLAS for passenger vessels



Our flood detection system is developed from PSM's established Connect family of data acquisition and display systems to provide a Type Approved dedicated Flood detection and display solution. The system is scalable for vessels of all types, with signal marshalling and acquisition modules and display points being distributed as needed

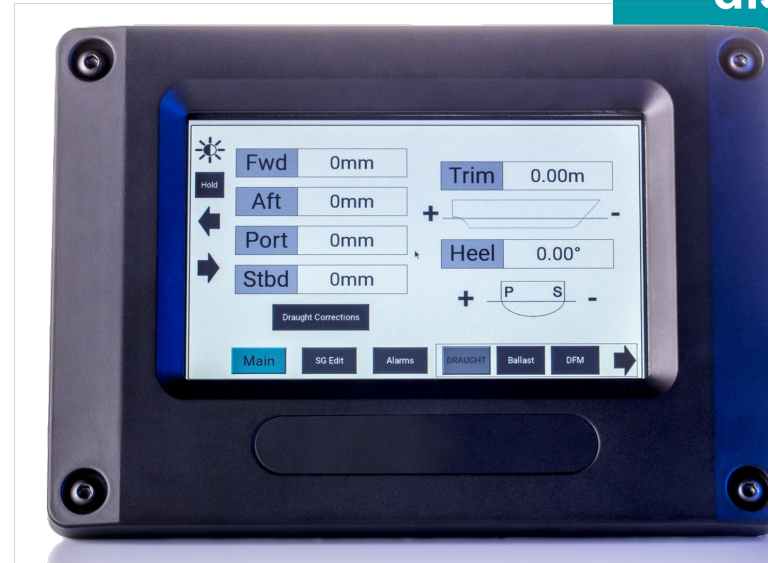
Applications

Naval	Superyachts	Cruise Ships	Ferries
Tankers	Offshore	Tugboats	Land-Based



Draught, Trim, & Heel Systems

- Suitable for all Vessel Types
- Screen layout is designed for maximum clarity of information
- Light & Dark mode (Day/ Night) display
- Instantaneous/averaged values
- Multiple display locations
- Space-efficient display suitable for console or wall mounting
- Serial data output to Vessel Platform Management System
- Simple low-cost installation



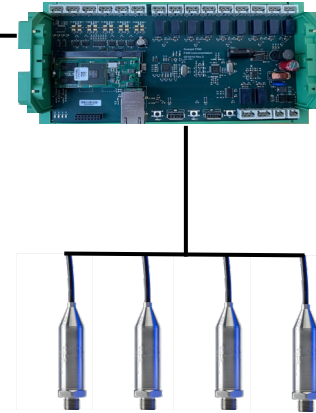
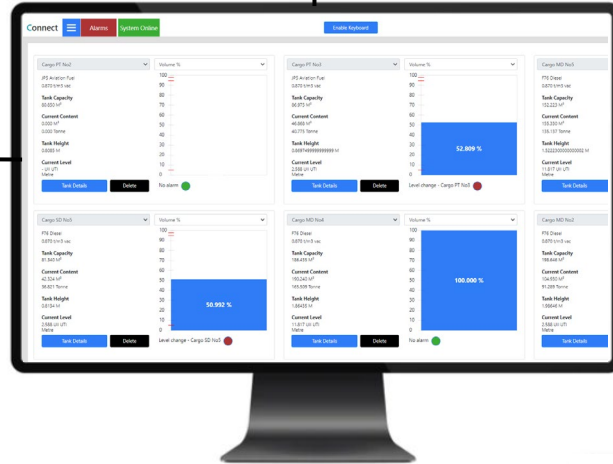
Our trim & and heel system is based upon PSM's established *Connect* vessel monitoring system and configured specifically for the monitoring and display of vessel trim, heel and optionally, draught at 2 or 4 points.

Comprising a central display with a 7" touchscreen, and a single remote wall mount enclosure with dual inclinometers to measure trim and heel angles, the system is supplied preconfigured with all parameters relevant to the intended application.

Applications

Naval	Superyachts	Cruise Ships	Ferries
Tankers	Offshore	Tugboats	Land-Based





COMPLETE TANK MONITORING SYSTEMS

Full in-house design means complete flexibility and customisation for any application.

- All configuration is centrally stored in non-volatile memory
- In-house developed firmware with no reliance on Windows or other external operating system
- As many remote displays as required can be added
- Each display station has screen presentation tailored to suit the needs of that location.
- Full user control means additional display pages may be added by the operator to suit their needs.
- Output to other onboard systems – AMS, IPMS, VDR, etc.

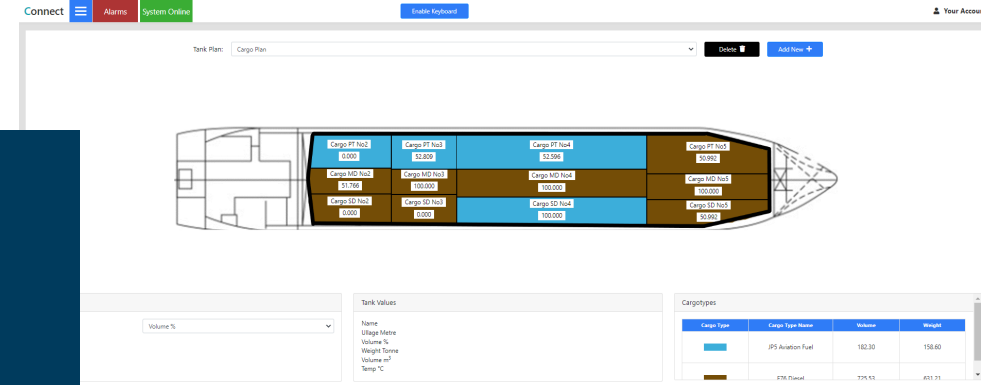
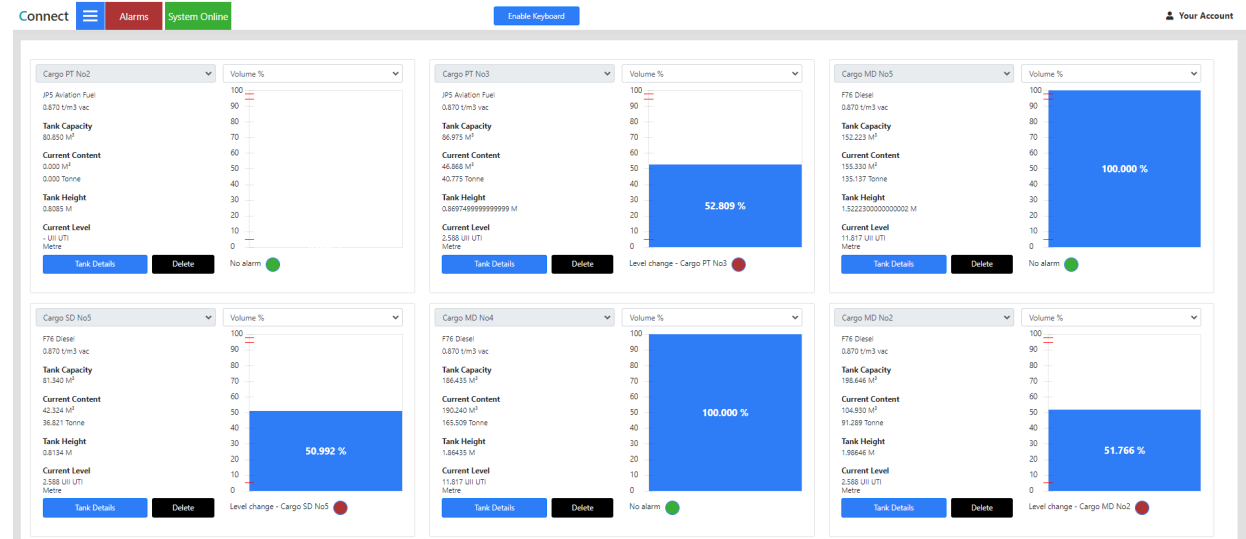
A completely scalable solution, PSM's Connect System is tailored for each application from small vessels such as Tugs and Superyachts up to the largest Tankers or Naval Vessels.

With direct digital communication to our APT1000 level transmitters and a full range of input modules with inbuilt I.S. safety barriers accepting analogue and digital signals from all instrument types.

Minimised cabling and hardware, multiple display locations, and completely customisable screen presentation provide the optimum package for any duty.

CONNECT – DIGITAL TANK GAUGING SYSTEM

- Accepts signals from transmitters of all types.
- Fully customisable display pages for tank contents, temperature, and alarm status.
- Specific displays for Vessel Draught, Trim and heel, and Void Space Flood Monitoring.
- In-house developed hardware and software with no reliance on a third-party operating system such as Windows.
- Reliable Solid-State memory– with integral 100% backup
- Simple editing/addition of parameters allows full customisation by the user
- Multiple displays may be connected



Applications

Naval Tankers Superyachts Offshore Cruise Ships Tugboats Ferries Land-Based